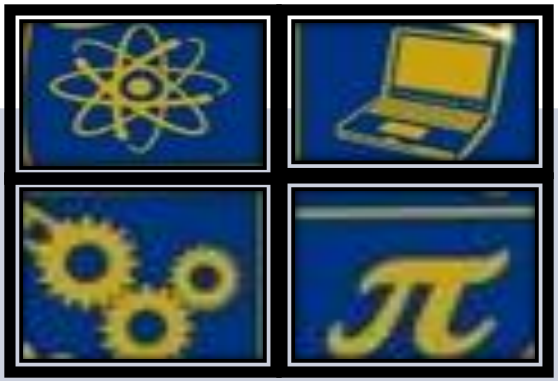
STEM for ALL through Universal Design for Learning

Spring EEA Follow-up

STEM Education is for ALL Students

Approach



Science, Technology, Engineering, Mathematics

21st Century

STEM Education Goal

UDL Considerations for STEM Units and Lessons

Goals or Standards

- STEM Standards of Practice
- Content Standards (Science, Technology/Engineering, Mathematics)
- Other Content Standards related to the real world problem, complex question, or global issue

UDL Considerations for STEM Unit/Lessons

Materials

- Use of Science tools
- Use of Technology and Engineering tools
- Use of Mathematics tools

UDL Considerations for STEM Unit/Lessons

Methods

- Problem/Project-based pedagogy
- Inquiry-based pedagogy

UDL Considerations for STEM Unit/Lessons

Assessments

Performance-based assessments

- portfolios
- project journals
- graphs and illustrations

UDL Resources

For STEM Education

- Understanding Disabilities
- Universal Design for Learning
- Differentiated Instruction
- Co-Teaching
- PBIS
- Assistive Technology
- Response to Intervention
- Transition
- Blog
- Discussions
- Archives (Teaching All Students)

Teaching All Students

Today's increasingly diverse classrooms present great opportunities as well as complex challenges for educators. How do you plan, instruct and assess so that all of your students learn and achieve to their maximum potential? In this part of the site, we focus on a variety of real-world tools and strategies that can assist you in promoting success for all your students, with a particular emphasis on students with disabilities. You will also see here that approaches like Universal Design for Learning, Differentiated Instruction and Co-Teaching – while originally intended to address the needs of students with disabilities – can actually help every student that you teach.

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Co-Teaching - Part 2

EARN MSDE CPD Credit this SPRING

Thinkport and Maryland State Department of Education are excited to announce the publication of the Spring 2012 course schedule. Download a copy of the course listings here.

Earn credit and experience a simulated **Inquiry Team** through the Thinkport course, Data-Driven Action Research Simulation for Classroom Teachers.

The KHAN Academy
http://www.khanacademy.org/

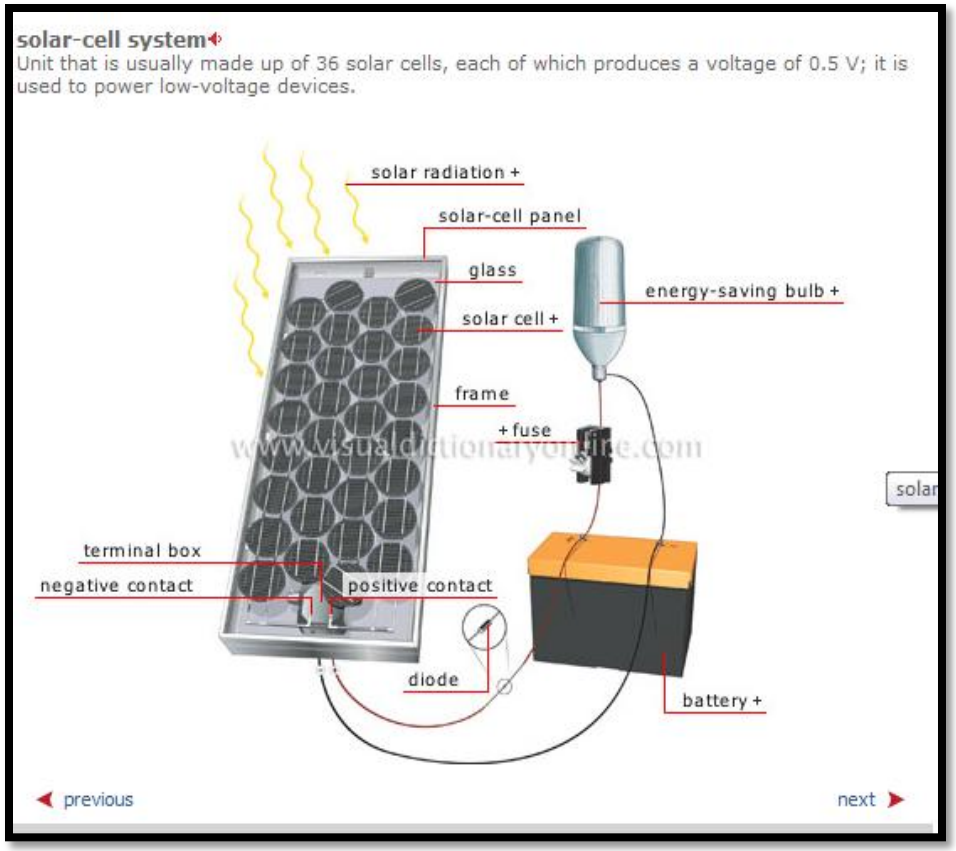
- Over 3,000 videos
- 315 Practice Exercises
- Multiple Content Tutorials

STEM Maryland

Maryland State Department of Education
Preparing World-Class Students

Visual Dictionary

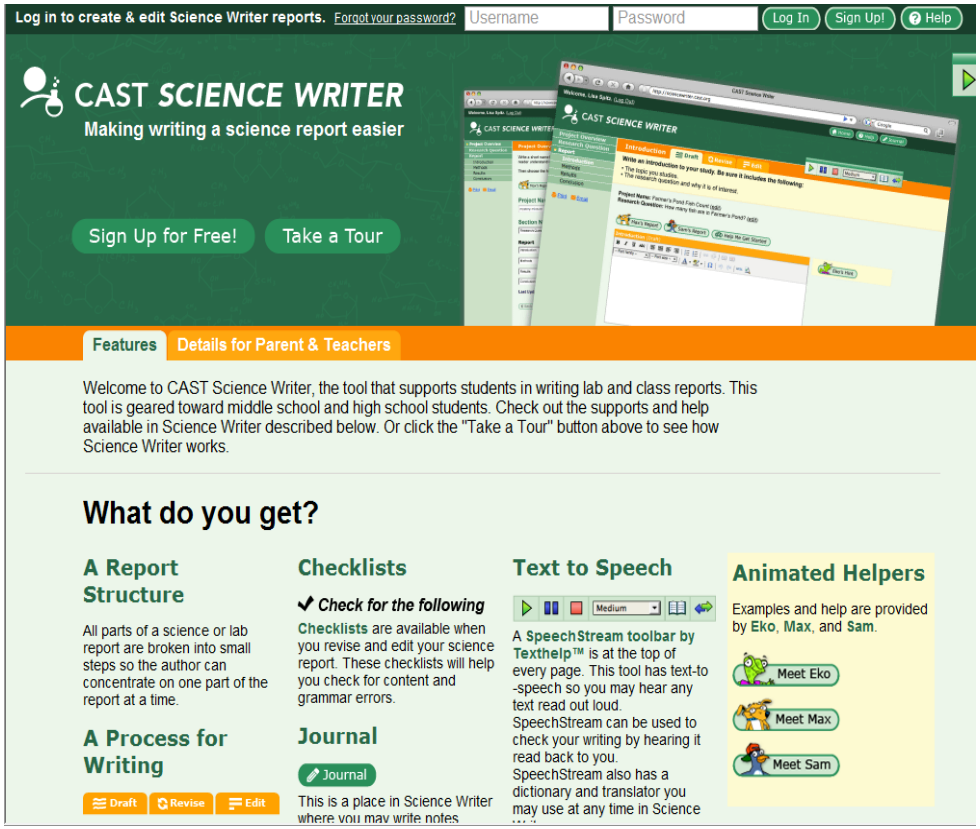
http://visual.merriam-webster.com/



- Includes labeled illustrations
- Provides explanations in up to 6 languages

CAST Science Writer

http://sciencewriter.cast.org/



- Includes a Text to Speech toolbar that reads any text out loud
- Assist with drafting, revising, and editing Science reports

STEM Maryland

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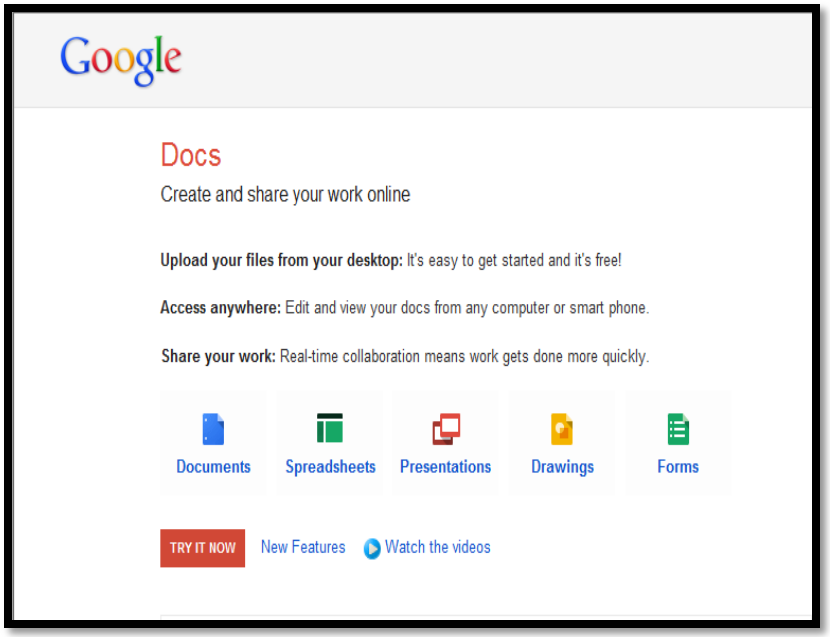
Google Docs

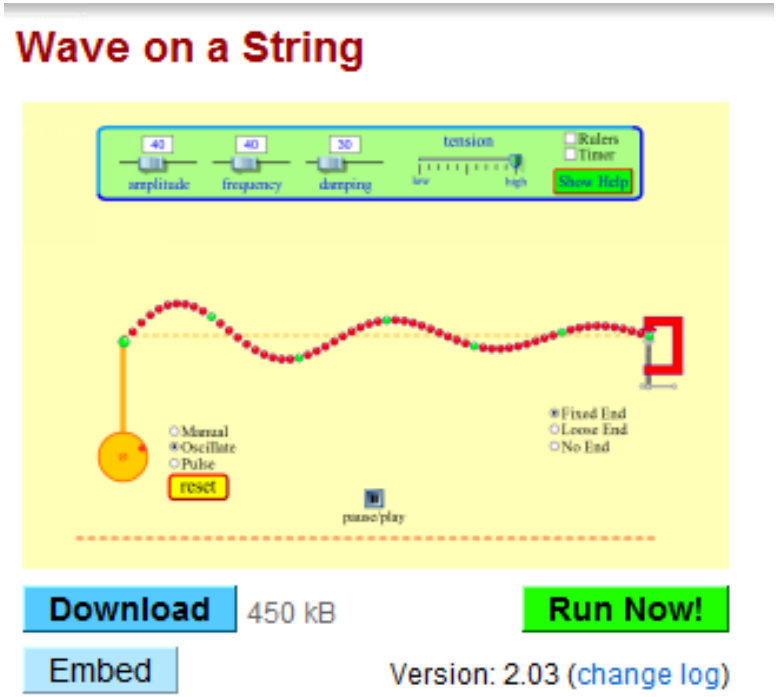
https://accounts.google.com/



- Create and Share documents online
- Share a variety of documents (spreadsheets, presentations, drawings)

PhET Interactive Science Simulations

http://phet.colorado.edu/en/simulations/category/new



- Research-based simulation of physical phenomena
- Measurement instruments
- Immediate responses

Try Engineering

http://www.tryengineering.org/

- Engineering Career Exploration in Multiple Languages

English	Japanese
Arabic	Portuguese
Chinese	Russian
French	Spanish
German	

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